

The opinion in support of the decision being entered today was **not** written for publication and is **not** precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte EVAN GEORGE COLGAN,
JEFFREY PETER GAMBINO
and KENNETH PARKER RODBELL

Appeal No. 2004-1886
Application No. 10/117,613

ON BRIEF

Before TIMM, JEFFREY T. SMITH and PAWLIKOWSKI, **Administrative Patent Judges**.

PAWLIKOWSKI, **Administrative Patent Judge**.

DECISION ON APPEAL

This is decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 13, 14, 16, 17, and 18. A copy of claim 13 is set forth below:

13. A method of fabricating an interconnect line on a contact in a semiconductor device comprising the steps of:
 forming a contact of a first metallic material,
 forming an alloy film by a self-aligned method to substantially cover said contact, said alloy film is capable of substantially preventing said contact from being etched by an etchant in a process for forming said interconnect line, and
 forming said interconnect line of a second metallic material to at least partially cover said alloy film sufficient to provide electrical communication between said contact and said interconnect line.

On page 4 of the brief, appellants state that claims 13-14 and 16-18 stand as a group. Accordingly, we select claim 13 as representative of the claims on appeal. 37 CFR § 1.192(c)(7) and (8) (2003).

Claims 13, 14, and 16-18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kasahara in view of Gambino.

The examiner relies upon the following references as evidence of unpatentability:

Gambino	5,256,597	Oct. 6, 1993
Kasahara ¹	60-245252	Dec. 5, 1985

(Japanese Patent Publication)

We have carefully reviewed appellants' brief, the examiner's answer, and the applied references. This review has led us to review conclude that the examiner's rejection is well founded.

OPINION

On page 6 of the brief, appellants point out that independent claim 13 recites, inter alia, "forming an alloy film by a self-aligned method to substantially cover said contact, said alloy film is capable of substantially preventing said contact from being etched", and "forming said interconnect line of a second metallic material to at least partially cover said

alloy film.” On page 7 of the brief, appellants argue that while Gambino teaches an aligned method for forming alloy films (hence, appellants do not dispute that Gambino teaches a self-aligned method), Gambino teaches a method for use in a completely different manner than that recited in appellants’ claims. Appellants argue that the alloy layer 60 of Gambino is used to protect a metal line over, or on top of, the alloy layer 60, and therefore is not an etch stop layer for protecting a metal under the alloy layer.

Appellants also argue that Kasahara and Gambino each teaches a process for a purpose that is completely different than that of the other reference, and that neither reference has shown the desirability to combine with the other reference and therefor there can be no motivation for combining the teachings of Kasahara and Gambino. Brief, page 7.

We refer to the examiner’s position on pages 4-5 of the answer and incorporate it as our own herein. Also, we refer to the examiner’s response to appellants’ arguments as set forth on pages 5-7 of the answer and incorporate it also as own herein. As explained on page 6 of the answer, Gambino teaches that metal alloy 60 is not undercut during the etching process and therefor contact 35 under metal alloy 60 will be protected during the etching process. The examiner correctly concludes, therefore, that the teaching of Gambino indicates that metal alloy 60 protects contact 35 under the metal alloy 60. The examiner also correctly concludes that because the metal alloy 60 of Gambino is not affected by the etching process, it functions as an etch stop layer. We agree, and hence, we are not persuaded by appellants’ arguments that Gambino is dissimilar from Kasahara such that the two references cannot be combined.

¹The Japanese reference is provided with an English translation of record.

The examiner also points out that Kasahara was relied upon for teaching use of an etch stop layer for protecting a metal line under the alloy layer, and the examiner correctly points out that appellants do not dispute these teachings of Kasahara.

We note that obviousness can be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggesting, or motivation to do so found either in the reference or in the knowledge generally available to one of ordinary skill in the art. In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). As pointed out on pages 4-5 of the answer, the examiner adequately explains how the combination suggests the claimed invention.

In view of the above, we therefor affirm the rejection.

Conclusion

The obviousness rejection is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)

AFFIRMED

CATHERINE TIMM)
Administrative Patent Judge)
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) BOARD OF PATENT
) APPEALS AND
JEFFREY T. SMITH) INTERFERENCES
Administrative Patent Judge)
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BEVERLY A. PAWLIKOWSKI)
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BAP/sld

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